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## **Locative inversion in Germanic and Romance: A conspiracy theory**

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### **1. Introduction**

Locative inversion (LI) is a cross-linguistically common construction, whereby the subject occurs postverbally, while a locative phrase is preposed to the canonical clause-initial subject position (1).

(1) **Into the room** came John.

LI occurs across a range of languages, yet its instantiations vary; that is, variation arises in both the syntactic and pragmatico-semantic constraints active on LI. For example, Null-Subject Languages (NSLs) such as Ibero-Romance varieties (Sheehan 2007; Corr 2016) and Italian (Pinto 1997; Tortora 2001; Bentley & Cruschina 2018) allow both overt LI of the type in (1) and so-called free inversions with a locative interpretation when no overt element occupies the preverbal position (2). We refer to this phenomenon as Null-Locative Inversion (Henceforth null-LI).

(2) Ha telefonato Dante.      (*Italian*)  
has phoned Dante  
'Dante has phoned (here/us).'  
(Pinto 1997: 20)

Instead, overt subject languages show more restricted LI; English LI necessarily involves an overt locative, while French, although similar, can license a sort of null-LI in matrix contexts involving unaccusative verbs of appearance (3).

(3) Arrive son ami.  
Arrives his friend

‘(and then) his friend arrives’

Formal typologies exist for LI in Ibero-Romance (Corr 2016) and Bantu languages (Salzmann 2011). We carry on in this tradition by offering a novel typology, focussing on the ability of different types of languages in Romance and Germanic to license different types of overt and null-LI.

To these ends, we compare one Romance NSL – Italian – against two SVO overt-subject languages – French for Romance, and English for Germanic. We also briefly compare these to one V2 language – Dutch, in order to show that locative inversions are orthogonal to the verb second (V2) constraint, i.e. V-to-C movement (*contra* Mohr 2005). These languages are chosen for typological breadth in relation to the null-subject parameter,<sup>1</sup> base word order, and requirements for an initial overt subject.

We shall argue that cross-linguistic variation in LI results from different conspiracies of properties determining syntactic subject requirements, i.e. the EPP, Subject of Predication (SoP) (cf. Cardinaletti 2004), a topic requirement; and the ability of different languages to check these with a varying set of overt and covert constituents.

We thus offer the preliminary set of typological requirements in (4):

**(4) Formal requirements for LI:**

- i. The existence of some formal EPP requirement in TP,
- ii. the ability of certain spatio-temporal XPs to satisfy the following formal requirements:
  - a. EPP (Dutch)
  - b. SoP (Italian)
  - c. EPP and SoP (French)
  - d. EPP and Topichood (English)

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<sup>1</sup> A comparative analysis of other null-subject Romance languages would be highly desirable and could shed important light on the variation highlighted in this paper. In fact, we believe that the core of our analysis of Italian LI is extendable to other Romance languages like Spanish; however, for reasons of space we must leave such comparison to future research. For a detailed analysis of relevant inversions in Ibero-Romance, see Corr (2016).

In section 2, we provide empirical and theoretical background on the cross-linguistic and non-unitary nature of LI. Section 3 contains a discussion and a formal analysis of LI in Romance NSL Italian. Section 4 offers a contrastive and formal exploration of French and English. Section 5 looks to finalize the proposed typology by exploring the possibility of LI in V2 languages which license many inversions; we show Dutch to possess a bare-bones version of LI. In section 6, we investigate structural constraints at the semantics and pragmatics interfaces. We conclude our findings in section 7.

## 2. Background

LI is characterized by a locative and sometimes temporal expression in preverbal position and a late subject DP in presentational focus (see Bresnan 1994) within a broad-focus structure. LI is traditionally considered a construction in which a non-subject constituent is topicalized to the sentence-initial position normally occupied by the subject. However, LI is cross-linguistically non-unitary phenomenon (cf. Salzmann 2011 for Bantu; Corr 2016 for Ibero-Romance). However, the behaviour of LI across Germanic and Romance has yet to receive considerable treatment together from a formal typological perspective. As we will show, LI-like structures across Romance and Germanic vary considerably. Here we provide some background before introducing an approach in which we distinguish Subject of Predication (Cardinaletti 2004) from topichood, and present multiple and conspiratorial loci of LI.

### 2.1 A non-unitary phenomenon: overt and null-locative inversions

LI is broadly divisible into two types: overt LI (5), and null-locative subject inversion (6) (null-LI), for which a covert locative argument is assumed (Pinto 1997; Tortora 2001; Sheehan 2007, 2010, 2016; Corr 2016; Bentley & Cruschina 2018). We first describe overt LI.

- (5)    Sous   le   pont    Mirabeau coule   la   Seine.    (*French*)  
          under the bridge   Mirabeau flows   the   Seine  
          ‘Under the Mirabeau bridge flows the Seine.’  
          (Apollinaire, *apud* Lahousse 2011: 66)

- (6)    a.   Morrió el   güelu.   (*Asturian*)

died the grandfather  
'(My) grandfather died.'

- b. Apareceu um cão. (*Portuguese*)  
appeared a dog  
'A dog appeared.'  
(Corr 2016: 1)

Overt LI typically involves a preverbal and anaphorically linked spatio-temporal XP and a late logical/semantic subject DP as part of a broad-focus or presentational structure (Benincà 1988; Cinque 1990; Costa & Martins 201; Leonetti 2017). From an information-structure perspective, Romance and English data conform to the same generalizations (cf. Ward and Birner 1998, 2011), according to which the construction is felicitous if the fronted constituent is not less familiar information than the postverbal constituent. The absence of a topic-comment partition in such inversions gives rise to a characteristic presentational reading.

A unifying feature of LI is that subject pronouns cannot invert (7). Subject pronouns are inherently familiar and thus hardly compatible with a broad-focus structure. Hence, they cannot surface in the focal end position under vP in a subject-initial language.

(7) Out of the cave emerged \*it/a bear.

A further property of preposed XPs in LI is general infelicity in out-of-the-blue contexts (but see Fernandez-Soriano 1999 for a possible exception involving stative unaccusatives). The status of the preverbal element is particularly controversial. When occurring preverbally, sentence-initial spatio-temporal expressions are analysable as either logical subjects of predication or aboutness topics, depending on the language involved (Pinto 1997; Fernandez Soriano 1999; Cardinaletti 1997, 2004; Lahousse 2007, 2011; Sheehan 2010; Corr 2016, Teixeira 2016). Following Cardinaletti (1997, 2004) and Rizzi (2005, 2018), we draw a distinction between aboutness topics and subject of predication (henceforth SoP); explicitly, SoP can be defined as [+ Aboutness], while an aboutness topic comprises [+D-linking; + Aboutness] (Rizzi 2005: 212). It follows that the topical status of fronted locatives is an unnecessary condition cross-linguistically; from a semantic-logical perspective, the function of SoP is more basic than an additional but optional topic function, depending on the

contextual properties of the sentence.<sup>2</sup> We shall show in section 4 that English is the only language which truly requires the locative to be a topic proper, discernible from a matrix/embedded asymmetry. That is, English bans LI in embedded contexts (Roberts 2010: 171-2); we assume D-linked topichood involves movement to the C-domain, which is blocked by Merge of a complementizer in C.

Unlike English, in NSLs the element occurring in the subject position does not appear to necessarily bear nominative Case, nor does it necessarily check  $\phi$ -features (Alexiadou & Anagnostopoulou 1998), as opposed to the idea that a subject requirement (EPP) is inherently related to a DP-subject bearing nominative Case (Chomsky 1982). Nonetheless, this element moves to a preverbal subject position in order to satisfy some other structural requirement, previously expressed as a Principle of Non-vacuous Predication (Bianchi 1993); an SoP feature (Cardinaletti 1997, 2004; Quarezemin & Cardinaletti 2017); an EPP feature on SpecTP or SpecCP (FinP) (Fernández-Soriano 1999; Sheehan 2007, 2010; Corr 2016); or the Subject Criterion (Rizzi 2005, 2018). Because NSLs show greater word-order flexibility than overt-subject languages, overt LI in NSLs must be distinguished from topicalization, clitic left dislocation, and focus fronting (Rizzi 2004; Cruschina 2010), since these are orthogonal to the notions of SoP or a subject-related EPP.

We thus distinguish the locus of EPP and SoP syntactic requirements: EPP in TP and SoP in a Subj(ect)P (Cardinaletti 2004), the latter located between the C-domain and TP (8).<sup>3</sup>

(8) CP > SubjP [+SoP] > TP [+EPP] > vP

Turning then to so-called free inversions in the absence of an overt spatio-temporal phrase, Romance NSLs appear to front a null-locative argument to the preverbal position, thus comparable to overt LI (cf. Pinto 1997; Tortora 1997, 2001, 2014; Sheehan 2007, 2010, 2016; Corr 2016). Consider the example in (9), which is interpreted as a broad-focus thetic statement, making a new announcement:

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<sup>2</sup> For presentational constructions available in Romance to avoid a topic interpretation of the subject, see Lambrecht (1994, 2000).

<sup>3</sup> The label CP in (8) and in our representations below is shorthand for a Rizzian (1997) Split-CP: Force>Top>Foc>Top>Fin. The projection SubjP above TP may indeed be considered as part of the CP, but here we leave this issue open since it is orthogonal to our account.

- (9) È entrata Beatrice. (*Italian*)  
 is entered Beatrice  
 ‘Beatrice has come in (here).’  
 (Pinto 1997: 20–22)

A common view is that such VSthetic sentences possess a null argument topic in the preverbal position, intuitively described as a location (Gundel 1974; Erteschik-Shir 1997, 2007) or a situation (Klein 2008). It has then been proposed that these clauses are licensed by a null stage topic (Giurgea and Remberger 2012a,b; Giurgea 2017; Teixeira 2016); stage topics are definable as presupposed constituents defining a spatio-temporal location already known to the addressee, resulting from either its discourse-old status or contextual salience (Erteschik-Shir 1997). Under this view, the difference between sentences in (5a) and (5b,c and 9) is the overt vs covert realization of the stage topic.

However, as in cases of overt LI, further explanation than the topic status of the covert argument is required; for example, null inversions are felicitous in out-of-the-blue contexts, supporting an approach that aboutness and topichood are distinct. More specific proposals separate the aboutness requirement ofthetic sentences from the notion of topic, maintaining that such null-LI is licensed by a covert event argument licensed by stage-level (eventive) states (Bianchi 1993; Borer 2010), or a situational argument functioning as SoP (Bentley & Cruschina 2018). Bentley & Cruschina (2018) observe thatthetic-subject inversion requires the eventuality denoted by the predicate to be bounded. This happens when a specific final goal (location or state) belongs to the verb’s argument structure, but also when such a goal is entailed or inferred via an implicature.<sup>4</sup> Only certain predicates with particular lexical-semantic properties are compatible with the bounded reading provided by the goal and thus admitthetic subject inversion:

- (10) a. Si è svuotato il serbatoio. (*Italian*)  
 REFL is emptied the tank  
 ‘The tank has become empty.’  
 b. # Si sono annoiati gli studenti

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<sup>4</sup> A reviewer points out that this resembles proposals by Tortora (1997, 2001) for the behaviour of the expletive locative clitic *ngh* in the “*ghi*-construction” in Borgomanerese.

REFL are become-bored the students  
'The students have become bored.'  
(Bentley & Cruschina 2018: 37)

The verb *svuotarsi* 'become empty' in (10a) allows the implicature that a maximum value (e.g. to become completely empty) is reached as a final goal state. Conversely, the same implicature does not arise with *annoiarsi* 'to become bored'. Neither of these structures exhibit nor presuppose a topic. Thus, neither the entailed or inferred goal argument is given, nor does it exhibit any connection with the previous discourse, but is introduced with the utterance itself. This argument is thus defined as the SoP. Therefore, the notion of topic and SoP are not synonymous.

Finally, French permits limited instances of null-LI with unaccusatives of appearance. However, unlike for NSLs (cf. Pinto 1997), this structure lacks a locative reading, but instead produces temporal and pragmatic turning-point reading akin to 'and then'. This indicates that while some kind of EPP and SoP satisfying argument is present, it is distinct from the null-locative or situational argument; we label these arguments *pro*<sub>LOC</sub> and *pro*<sub>SIT</sub> respectively. Thus, different types of null argument appear to license different LI constructions. We investigate this explicitly in section 4.1.

## 2.2 A conspiratorial approach

We have established that an overt locative and different proposed types of null argument can potentially satisfy preverbal subject requirements. As discussed, a feature of NSLs is that a subject-related EPP in SpecTP appears absent (cf. Alexiadou & Anagnostopoulou 1998). In other words, the T's EPP need not be satisfied via subject-DP movement but rather by other means. Proposed devices include the satisfaction of EPP via a *pro* (Rizzi 1986 *et seq.*), long-distance agreement (Cardinaletti 2004: 151–152; Quarezemin & Cardinaletti 2017), or alternatively by morphological features on the verb itself (Alexiadou and Anagnostopoulou 1998). We take no definitive position except that EPP in NSLs has less pervasive effects than in overt-subject languages like English, in which DP-movement to SpecTP is uncontroversial.



Therefore, the presence of the EPP and/or SoP are crucial ingredients for LI, even if overt checking of EPP can be avoided.<sup>5</sup>

We have thus established two possible prerequisites for LI in the high T-domain: SoP in SubjP and EPP in SpecTP. Moreover, the locative in LI may optionally (but need not) be a Topic [+ Aboutness; + D-linking]. LI is thus an empirically and theoretically heterogeneous phenomenon, yet different languages utilize a set of base ingredients in different combinations to create different outcomes. This discussion serves as the context for the proposed set of requirements in (4), given again below:

**(11) Formal requirements for LI:**

- i) The existence of some formal EPP requirement in TP,
- ii) the ability of certain spatio-temporal XPs to satisfy the following formal requirements:
  - a. EPP (Dutch)
  - b. SoP (Italian, Spanish)
  - c. EPP and SoP (French)
  - d. EPP and Topichood (English)

In the coming sections we demonstrate that NSLs reliance on only SoP and not EPP, combined with a greater range of covert arguments, makes for a maximally flexible LI system. The occurrence of French LI in matrix and embedded clauses suggests that both EPP and SoP are active, yet a semantically constrained range of null inversions present a challenge. In contrast, the limitation of English LI to matrix contexts indicates that EPP and C-domain topichood are active, but the role of SoP remains shadowy. With this discussion in mind, we turn to investigate the formal properties of LI in Italian, English, and French in order to develop a more detailed typology.

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<sup>5</sup> It cannot be ruled out that the features responsible for projecting SubjP and TP are in fact bundled on a single head, e.g. T in languages like English or French; this would necessitate a feature-scattering approach à la Giorgi & Pianesi (1997).

### 3. Locative inversion in a null subject language: the case of Italian

As an NSL, Italian allows both overt LI and null-LI. This is evident in sentences featuring a postverbal subject, with either semantically or pragmatically inferred locative anchoring (12a,b) or an overt sentence-initial locative expression (12c):

- (12) a. È entrata Beatrice.  
is entered Beatrice  
'Beatrice has come in (here).'
- b. Ha telefonato Dante.  
has phoned Dante  
'Dante has phoned (here/us).'
- c. In questa casa ha abitato Giacomo Leopardi.  
in this house has lived Giacomo Leopardi  
'Giacomo Leopardi lived in this house.'  
(Pinto 1997: 20–22)

As pointed out in section 2, there are reasons to believe that null and overt subject inversion must be treated separately. While sentences (12a) and (12b) are acceptable in out-of-the-blue contexts, the preposed overt locative in (12c) requires linking with the previous context for it to be felicitous inversion contexts.

Postverbal overt locatives are hardly compatible with the subject inversion in (13a) and (13b),<sup>6</sup> as it would clash with the deictic ('here') interpretation of the null-locative argument; S-V-XP order is preferable in these cases, as shown in (14):

- (13) a. È entrata Beatrice (?? in cucina).  
is entered Beatrice in kitchen  
'Beatrice has come in (the kitchen).'

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<sup>6</sup> Where such inversions involve an indefinite subject the presence of the overt locative is improved (see Bentley & Cruschina 2018); a reviewer points out that this is also the case in Spanish (see Sheehan 2007).

- b. Ha telefonato Dante (?? all' hotel).  
 has phoned Dante to-the hotel  
 'Dante has phoned (the hotel).'
- (14) a. Beatrice è entrata in cucina.  
 Beatrice is entered in kitchen  
 'Beatrice has come in the kitchen.'
- b. Dante ha telefonato all' hotel.  
 Dante has phoned to-the hotel  
 'Dante has phoned the hotel.'

Furthermore, Italian LI occurs in both matrix and embedded contexts, as shown in (15). This indicates that topichood and thus movement to the C-domain is not involved as Merge of a complementizer in C would block A'-movement to the C-domain and limit LI to matrix clauses.

- (15) Tutti sanno che...  
 all know that  
 'Everybody knows that...'
- a. è entrata Beatrice.  
 is entered Beatrice  
 'Beatrice has come in (here).'
- b. ha telefonato Dante.  
 has phoned Dante  
 'Dante has phoned (here/us).'
- c. in questa casa ha abitato Giacomo Leopardi.  
 in this house has lived Giacomo Leopardi  
 'Giacomo Leopardi lived in this house.'

Notably, the ability of agentive unergative verbs such as *telefonare* ‘call’ to license LI in NSLs (Pinto 1997; Sheehan 2007) shows that LI is not obligatorily related to unaccusativity (Levin & Rappaport Hovav 1995; Bentley & Cruschina 2018); yet this seems only possible in NSLs. Moreover, those verbs licensing null-LI with a locative *here* interpretation entail a locative goal, speaker-oriented inherently directed motion (e.g. *arrive*) or a more generic speaker-oriented deictic interpretation (e.g. *live*). Following Pinto (1997) and Tortora (1999, 2001), we take these verbs to select for a thematic null-locative argument, *pro*<sub>LOC</sub>. However, NSLs also permit overt locative inversions and free inversions with unaccusative verbs not involving a locative goal or speaker-oriented deixis. Where an overt locative is merged (16a), the overt locative acts to satisfy preverbal subject requirements, i.e. acts as SoP; yet, the free-inversion structure (16b) does not obtain the same locative reading. Following Bentley & Cruschina (2018), and building on the discussion in section 2, such null inversions involving verbs of disappearance (or movement away from the speaker) do not select *pro*<sub>LOC</sub> but instead rely on a situational argument *pro*<sub>SIT</sub> outside the thematic structure of the verb but equally capable of acting as SoP (but see Corr 2016 for a GoalP for *die*).

- (16) a. In questa casa    è    morto    Manzoni.  
           In this     house is died    Manzoni  
           ‘Manzoni died in this house’
- b. È    morto    Umberto Eco  
           is died    Umberto Eco  
           ‘Umberto Eco died’

Both truly locative null inversions and inversions involving a covert situational-argument are sensitive to the semantic and lexical properties of the predicate, which in turn impose some limitations on the tenses admitted in this structure. In particular, only predicates and tenses that allow for a bounded reading of the denoted eventuality are compatible with null LI (see Bentley & Cruschina 2018), while overt LI proves to be less constrained. Observe the contrast between (17a) and (17c) with respect the present tense, and compare the different grammaticality of the (compound) past tense and the progressive in (17b).

- (17) a. ?Entra Beatrice.  
           enters Beatrice  
           ‘Beatrice comes in (here).’
- b. ?Sono partiti i ragazzi. / Stanno partendo i ragazzi.  
           are left the boys stay leaving the boys  
           ‘The boys have left/are leaving.’
- c. In questa casa abita Giacomo Leopardi.  
           in this house lives Giacomo Leopardi  
           ‘Giacomo Leopardi lives in this house.’

The general consensus is that LI in Italian, and indeed beyond, is incompatible with negation. While it is in fact possible to include negation in such inversion structures, a narrow-focus reading of the sentence-final subject necessarily replaces broad-focus. Such structures are only felicitous in the appropriate licensing contextual conditions, as illustrated in (18) where a contrastive narrow focus of the inverted subject is supported by the final negative tag containing a focal alternative:

- (18) a. Non è entrata [Beatrice]<sub>F</sub> (, ma Paola).  
           not is entered Beatrice but Paola  
           ‘It wasn’t Beatrice who came in, but Paola.’
- b. Non ha telefonato [Dante]<sub>F</sub> (, ma Beatrice).  
           not has phoned Dante but Beatrice  
           ‘It wasn’t Dante who has phoned, but Beatrice.’
- c. In questa casa non ha abitato [Giacomo Leopardi]<sub>F</sub> (, ma Ugo Foscolo).  
           in this house not has lived Giacomo Leopardi but Ugo Foscolo  
           ‘It wasn’t Giacomo Leopardi who lived in this house, but Ugo Foscolo.’

The necessary interpretational change indicates that in these sentences subject inversion is not related to the locative anchoring of the sentence, but rather to the narrow focalization of the postverbal subject (see Belletti 2004); we return to discuss the ban on negation in LI in

section 6. Nonetheless, the question remains, whether subject inversion here is attributable to the locative interpretation or to independent motivations. The *here*-deictic interpretation in negated null-LI is still possible, but since these negated sentences operate a kind of correction, the actual reading depends on an antecedent assertion or presupposition, and hence on the previous context.

Despite the observed differences, null and overt LI share an important property, the ability of both overt and null-locatives to act as SoP. Following previous studies (Pinto 1997; Tortora 1997, 2001), Bentley & Cruschina (2018) claim that a silent preverbal argument is key to licensing subject inversion in broad-focus sentences lacking an overt SoP. This argument acts as SoP to the presentational statement and may either coincide with a thematic argument selected by the verb, such as the locative goal of certain motion verbs, or be a non-thematic situational argument inferred from the context, e.g. disappearance verbs.

This analysis has two important implications. Firstly, Italian LI belongs to a general phenomenon of broad-focus subject inversion licensed under the same conditions – modulo the locative nature of the null or overt SoP. Secondly, the notion of SoP allows us to dispense with the EPP requirement as the trigger of LI in Italian. Following Cardinaletti (2004), in this account it is assumed that the null or overt locative phrase does not move to SpecTP (nor SpecCP) to satisfy the EPP in Italian, but it rather directly targets a dedicated position for the subject of the predication, SubjP (Cardinaletti 2004, Bentley & Cruschina 2018). In light of this, EPP satisfaction in Italian is orthogonal to the presence of a locative phrase in the subject position, as we have already discussed for NSLs. In other words, the EPP plays no active role in LI in Italian, but SoP is crucial.

We therefore suggest the following analyses for overt LI (19a) and null-LI in (19b). The formal ingredients and the resulting types of LI are summarized in Table 1.<sup>7</sup> In the case of *pro<sub>ST</sub>*, a different derivation from (19b) must be postulated: since this argument is not semantically selected by the verb as part of its thematic grid, we have assume that no movement from the vP is involved and that this argument is directly merged in SubjP (see Bentley & Cruschina 2018).

- (19) a. [CP C [SubjP PP<sub>LOC</sub> *In questa casa* [Subj [TP T *ha* [vP v *abitato* [VP ∅ [SC DP  
*Giacomo Leopardi* PP<sub>LOC</sub>]]]]]]]

<sup>7</sup> Recall that *pro<sub>LOC</sub>* refers to the covert thematic locative argument, while *pro<sub>ST</sub>* refers to the covert situational argument.

- b. [CP C [SubjP *pro*<sub>LOC</sub> [Subj [TP T è [VP v *entrata* [VP v [SC DP *Beatrice* ~~*pro*~~<sub>LOC</sub>]]]]]]]

Table 1: The formal ingredients of LI and attested types in Italian

	Formal ingredients					Types of LI		
	Loc checks EPP on T	Loc checks SoP in SubjP	<i>pro</i>	<i>pro</i> <sub>LOC</sub>	<i>pro</i> <sub>SIT</sub>	Null-LI	LI Mat.	LI emb.
<b>Ital.</b>	-	+	+	+	+	+	+	+

The question of whether these factors in LI are common to all (or at least other) NSLs and to what degree variation must be acknowledged, is certainly vaild. This contrastive and comparative task goes beyond the purpose of this paper, but we hope that our account might prove fruitful in future work. We shall now discuss the behaviour of LI in overt-subject languages.

#### 4. Locative Inversion in overt-subject languages

In contrast to NSLs, English and French possess a strong requirement for an initial overt subject, traditionally associated with an EPP requirement in SpecTP (Chomsky 1982 *et seq.*, Rowlett 2007). In this section, we explore the behaviour of LI English and French in order to draw comparison between each other and Italian. We argue that Italian, French and English appear to sit on a continuum relating to the flexibility and availability of particular LI patterns: English the most conservative, French in between, and Italian the most flexible. We first compare the null-LI shown possible Italian with French and English.

##### 4.1 Null-locative inversion: a comparison

Languages requiring overt subjects should not permit null-LI. English is well-known to possess a strong subject-related EPP (Chomsky 1982) requiring the presence of a phonologically overt XP in Spec-TP, ruling out any instantiation of null-LI. French, also an overt-subject language, is expected to behave like English, yet it turns out to be more flexible in the availability of overt expletives and covert elements.

Null-inversions with verbs of disappearance such as (20a), shown for Italian, are only rendered grammatical in French by a preverbal expletive (20b) and an indefinite subject

related to definiteness effects associated with the expletive (Sheehan 2007: 167). In English, expletives produce the same definiteness effects, yet expletives are infelicitous with such verbs (20c); *there* can only occur with unaccusatives encoding a stative existential readings or appearance/speaker-oriented motion.

- (20) a. È morto Umberto Eco. (*Italian*)  
           is died Umberto Eco  
           ‘Umberto Eco (has) died.’
- b. \*(Il) est mort quelqu’un/ Umberto Eco. (*French*)  
           it is died somebody/ Umberto Eco  
           ‘Somebody/Umberto Eco died.’
- c. #There died someone/Umberto Eco. (*English*)

Building on this observation, it becomes clear that French and English unaccusative verbs of appearance and disappearance behave differently. NSL cases of null-LI involving appearance verbs, such as (21a), are grammatical in English with expletive *there*; a purely presentational reading obtains without deictic semantics (21b). In contrast, French unaccusatives of appearance allow VS inversions with or without an expletive (15c), but a more abrupt narrative sequence reading is produced without expletive *il*. We shall return to why this is the case in section 4.1.

- (21) a. È spuntato/apparso un cane. (*Italian*)  
           is appeared a dog  
           ‘A dog appeared.’
- b. There appeared a dog. (*English*)
- c. (Il) est apparu un chien. (*French*)  
           it is appeared a dog  
           ‘A dog appeared.’



The instance of null-LI in (22a) proves infelicitous in French and is unimproved by expletive *il* (22b); we note slight improvement with an indefinite subject, and more improvement with a heavy subject e.g. *Marie, Paul et Pierre*, which is attributable to a separate phenomenon (see Lahousse 2006). No comparable linearization is possible in English (22c).

- (22) a. Ha telefonato Maria. (*Italian*)  
           has phoned     Maria
- b. ?? Il a téléphoné quelqu'un / \*Marie. (*French*)  
           it has called     someone     Marie  
           'Somebody/Marie called.'
- c. \* (There) called someone/Maria. (*English*)

We take the absence of the types in (20, 22a) in English and French, and (21a) in English to result from several key differences from NSLs like Italian. Firstly, we assume that that French and English unergative verbs like *call/téléphoner* cannot generate an internal spatio-temporal argument (cf. Pinto 1997), i.e. *pro*<sub>LOC</sub>. Secondly, the absence of any null inversion involving verbs of disappearance suggests that in these languages a covert situational argument (i.e. *pro*<sub>SIT</sub>) is unavailable. This may be correlated with the availability of null subjects more widely; it is unclear why *there* is incompatible with verbs of disappearance, yet a possible stipulation is that it is merged in a small clause and can only be selected for by particular types of verbs (see Moro 1997). Lastly, the apparent need to satisfy the EPP via overt material in these languages (see Sheehan 2007) should rule out free-inversion type structures. However, French verbs of appearance seem exceptionally to allow null-LI.

Let us then consider the apparent French null-LI in (21c). Unlike in NSL cognate structures, the inversion does not give rise to a locative *here* reading but instead a more abrupt temporal turning-point reading akin to *and then*. Thus, a *pro*<sub>LOC</sub> appears an inappropriate hypothesis. It is possible that French licenses an expletive *pro* here, yet the *then* reading is unlikely to obtain from an expletive and the argument structural constraints are left unresolved. Pinto (1997) suggests that a null argument may also be temporal, yet it would be peculiar if French allowed one but not the other.

We would like instead to propose that a decisive property of French verbs of appearance/speaker-oriented directed motion is that they select a covert experiencer/observer

argument *Exp<sub>LOC</sub>* and thus presuppose the occurrence of a perception event *e* on the part of the experiencer/observer. The (asserted) appearance event *e'* is part of what is observed through the (presupposed) perception event. This appearance event *e'* amounts to the emergence of a new element - the postverbal DP's referent - in the experiencer's field of perception. This perception event is associated with its own time interval, which gives the topic time of the appearance event. This explains a temporal turning-point reading akin to *then* in these inversions.

Indeed, Landau (2010) argues that experiencers and mental locations are conceptually similar, by which experiencers can act as abstract locative subjects; in short, there is something inherently locative about experiencers. In addition, Cardinaletti (1997, 2004) expressly states that, in Italian, overt dative experiencers too can occur in SubjP. Thus, in French covert *Exp<sub>LOC</sub>* semantically and syntactically resembles a subject. The covert experiencer is however impossible with *die*, *disappear*, or *phone*, as they cannot presuppose a perception event. This begs the question, however, as to why this is not possible in English. We assume that in English the experiencer is a non-syntactic implicit argument that cannot satisfy EPP or SoP requirements. A key difference between English and French then is the ability of verbs of appearance to select a syntactically active null-experiencer.

Finally, we note that French subject inversions have received much attention. We have concentrated on null-inversions in matrix contexts, since free inversions involving unaccusative verbs of disappearance in embedded contexts in high register French (23a) are impossible in matrix contexts (23b). We suspect that the structure in (23a) has a separate formal motivation. Kayne and Pollock (1978) note that such behaviour occurs adjacent to *wh*-elements and in subjunctive contexts, both of which are mediated by C. Given that the EPP features of T are taken to be inherited from C (Chomsky 2005, cf. Biberauer & Roberts 2010, Roberts 2010b), we take the embedded null inversion to be licensed by C's relation to T and not by satisfaction of EPP or SubjP by some *pro* (cf. Kayne & Pollock 1978, Roberts 2010b for alternatives).

- (23) a. Je me demande quand partira ton ami. (French)  
 I REFL asked when leave.FUT.3SG your friend  
 'I wonder when your friend will leave.'  
 (Kayne & Pollock, 1978: 595–598)

- b. \*Part son ami.

leaves his friend

Therefore, we propose the analysis in (24) for French null-LI in which  $Exp_{LOC}$  checks both EPP and SoP requirements.<sup>8</sup> We compare the ingredients of null-LI across the observed languages in Table 2, where uVoA in the last column stands for unaccusative verbs of appearance. Note also that the negative setting (-) in English for the first two columns only refers to the fact that no covert item can check EPP or SoP, not that no overt item may do so.

(24) [CP C [SubjP  $Exp_{LOC}$  [Subj [TP  $Exp_{LOC}$  [T est [vP v *apparu* [SC DP *un ours*  $Exp_{LOC}$ ]]]]]]]

Table 2: The formal ingredients of LI in null-LI across Italian, French and English

	Loc checks EPP on T	Loc checks SoP in SubjP	<i>pro</i>	$pro_{LOC}$	$pro_{SIT}$	$Exp_{LOC}$	Null-LI
<b>Ital.</b>	-	+	+	+	+	-	+
<b>French</b>	+	+	-	-	-	+	-   uVoA
<b>English</b>	-	-	-	-	-	-	-

We have thus shown a continuum for null-LI from Romance NSLs to French to English. We now turn to investigate overt cases of LI in French and English in order to further expand the developing typology.

## 4.2 Overt Locative Inversion in English and French

LI has received considerable treatment in the generative literature for both English (Bresnan 1977; Stowell 1981; Coopmans 1989; Hoekstrsa & Mulder 1990; Levin & Rappaport-Hovav 1995; Collins 1997; Alexiadou & Anagnostopoulou 2001; Culicover & Levine 2001; Rizzi & Shlonksy 2006; Salzmann 2011; Roberts 2010a) and French (Kayne & Pollock 1978, 2001; Bonami et al. 1999; Marandin 2001; Kampers-Mahne et al. 2004; Lahousse 2003, 2006; Sheehan 2007 for Romance). We look here to compare the primary syntactic characteristics of overt LI in both languages.

<sup>8</sup> There are no explicit interpretational effects suggesting the presence of  $Exp_{LOC}$  in Italian, yet we lack clear syntactic evidence to rule out its presence. It is possible that  $pro_{LOC}$  includes the experiencer, the experiencer is implicit, or that it is not there.

### 4.2.1 General properties

Overt LI induces broad/presentational focus on the sentence, including the verb and the postverbal DP; both English and French LI adhere to this description, whereby a typically more familiar spatio-temporal XP is preposed (Landau 2010:120).

From an argument structure perspective, both English and French overt LI are sensitive to verb type both at a structural and semantic level as well as the thematic and aspectual properties of the predicate. LI is primarily associated with unaccusative verbs in English (Stowell 1981; Coopmans 1989), a generalisation that holds for French, too; change-of-state verbs are ruled out (Levin & Rappaport-Hovav 1995). The different thematic and aspectual properties of predicates in LI are shown in (25a–c) (Roberts 2010a: 171). The ban on change-of-state verbs (25d) falls out from proposals by Alexiadou & Schäfer (2011) that they generate their patient in Spec-vP.

- (25) a. Into the room came a cat. PATH  
 b. Under the car lay a cat. LOCATION  
 c. From under the car emerged a cat. SOURCE  
 d. \*In the kitchen broke a window. CHANGE OF STATE

However, some agentive unergatives are known to participate (26a,b). We cautiously assume that such instances involve unergatives inserted in unaccusative structure (Hoekstra & Mulder 1990, Roberts 2010a: 171), i.e. the Voice layer (or Spec/vP) is absent and the DP subject is generated in a small clause with the locative complement (27a,b) (but see Levin & Rappaport-Hovav 1995):

- (26) a. Into the room ran a small rabbit. (*English*)  
 b. Dans la chambre a couru un petit lapin. (*French*)  
     in the room has run the small rabbit

- (27) a. [vP V *run* [SC DP<sub>a</sub> *boy* PP<sub>into</sub> *the room* ]]  
 b. [vP V *courir* [SC DP *un lapin* PP<sub>dans</sub> *la chambre*]]

Strikingly, however, variation exists between languages concerning which types of verbs can be inserted in unaccusatives structures. Consider the contrast between English (28a) and French (28b); while English allows manner verbs of motion, e.g. *roll* to be co-opted as shown in (27a), in French these verbs remain necessarily unergative and are generally ungrammatical with preposed directional PPs, accounting for the ungrammaticality of (28b). Indeed, this behaviour has parallels in Italian (see Folli & Ramchand 2005) and goes beyond the possibility of unaccusative structure, relating rather to how and where locative states and motion goals are formally encoded, i.e. in the formal feature of the verb or on satellite elements (cf. Talmy 2000; Folli & Ramchand 2005; Acedo-Matellán 2016). Hence, while these alternations have typological consequences, we must leave aside further discussion of which languages allow unergatives in a PP-induced unaccusative structure, as it relates to a larger phenomenon outside the goals of this chapter.

- (28) a. Down the hill rolled the ball. (English)  
 b. \*Tout en bas de la colline a roulé la balle. (French)  
 all in low of the hill has rolled the ball

Like Italian (cf. § 3), English and French also forbid negation in LI (shown for French in (29b), as it is incompatible with broad focus. This contrast is not derivable via the syntax, as we assume NegP to be a projection not structurally incompatible with LI, i.e. between TP and vP.

- (29) a. Hors de la maison est sortie Boucle d'Or. (French)  
 b. #Hors de la maison n' est pas sortie Boucle d'Or.  
 out of the house NEG is NEG exited Goldilocks  
 Literal translation: Out of the house didn't come / came not Goldilocks  
 Intended: 'Goldilocks didn't come out of the house.'

Moreover, English LI does not permit the periphrastic present perfect in LI (30a) or in any context with *do*-support (30b), while French LI does allow the periphrastic perfect, as already shown in (26b). A ban on *do*-support in affirmative contexts likely results from a conflict between verum focus, marked by *do*, and broad focus. A key difference between French (and Italian) and English is that the former allows compound perfect tense: *passé composé* (French) or *trapassato prossimo* (Italian). This is because the French and Italian compound

perfect tenses do not bear the same aspectual content as the English present perfect; they have become the unmarked choice for past perfectivity (see Schaden 2009). Why, however, the aspectual content of the present perfect is incompatible with LI does not lie in the syntax but in the semantics of tense and aspect, since futures (30c) and progressives (30d) are permissible, although the latter prefers locative over directional contexts (Roberts 2010a: 170-71).

- (30) a. #Down the hill has rolled the ball.  
 b. #Down the hill did/does(-n't) roll the ball.  
 c. Down the hill will roll the ball.  
 d. At the bottom of the hill is sitting the ball.

The pragmatic and semantic motivations behind the phenomena in (29) and (30) are important questions for an investigation into LI and should not be overlooked. However, we have concentrated on building a syntactic typology of based around the ability of particular items to satisfy subject requirements. Therefore, our priority here is to undertake a syntactic exploration of the formal particularities of LI in this regard. We return to a treatment of extra-syntactic factors in section 6.

#### 4.2.2 Matrix and embedded (a)symmetries

Like in Italian, French LI is felicitous in both matrix and embedded contexts (31a,b). Contrariwise, English LI shows a strict matrix-embedded asymmetry, permitting only matrix LI (Stowell 1981); note the contrast between (31c) and the infelicitous embedded (31d).

- (31) a. Sur la place se dresse la cathédrale. (*French*)  
 on the square REFL stands the cathedral  
 'On the square stands the Cathedral.'
- b. Tu verras que de cette maison sortiront trois étudiants.  
 you see.FUT.2SG that from that house exit.FUT.3PL three students  
 'You will see that three students will get out of this house.'
- c. Into the room came John. (*English*)

- d. #We were surprised that into the room came John.

The infelicity of English embedded LI has been misconstrued as a residual verb second (V2) structure, i.e. V-to-C movement and locative XP-raising to SpecCP (cf. Mohr 2005). This is because i) English was formerly a V2 language, and b) asymmetrical V2 languages, e.g. Old and Middle English (Fischer et al. 2000) disallow embedded inversion (Holmberg 2015), yet the ungrammaticality of (32a) compared to (32) shows LI cannot be V2, since the subject cannot fall between the auxiliary and lexical verb, a characteristic of V2. Indeed, English lexical verbs remain low in vP, as V-to-T movement was lost in Early Modern English (Fischer et al. 2000). French overt LI is likewise synchronically orthogonal to historical V2 (see Vance 1997), as  $XV_{FIN}SV$  is also ungrammatical in French (33).

- (32) a. \*[down the hill] will [the ball] roll.      (*English*)  
       b. [down the hill] will roll [the ball]

- (33) \*Hors de la maison est Boucle D'Or sortie.      (*French*)  
       out of the house is Goldilocks exited  
       Intended: 'Goldilocks came out of the house.'

The peculiarity of English LI then derives from locative XPs' ability to override the otherwise strong subject-oriented EPP in TP (cf. Haeberli 2002, Roberts 2010a, among others), i.e. the need for a subject DP to occupy SpecTP, but crucially not remain in the TP-domain. We take this to mean that the locative in English is infelicitous as SoP and necessarily a D-linked topic, i.e. [+ Aboutness; +D-linking]. We shall return to the exact mechanism by which SoP is checked in our formal analysis for English below. The difference then between English and French lies in the fact that the locative in French need not be a topic, while it is capable of checking/valuing SoP, i.e. [+ Aboutness]. We take this difference to mean that fronted locatives in French can satisfy both the EPP and SoP.

#### 4.2.3 Initial temporals and locatives XPs: same but different

If we then take the strength of preference for preverbal subjects in French and English to emerge from the combination of Ts EPP and SubjP' SoP requirements, we might conclude

that the “subject” position in French is more flexible than in English. Indeed, this was already apparent in the reported instances of null-LI in French, but it is again visible in variation in the types of preposed temporal XPs possible in French LI but not English. Both English (34a) and French (34b) allow certain temporal elements in the preverbal position. English inversions with temporal expressions have been claimed to typically invoke a temporal location (cf. Birner 1996: 33).

(34) a. Then came the Trump Budget... (English)  
(Davies 2008: COCA, Daily Beast, 2017)

b. Alors entrèrent trois soldats. (French)  
then entered three soldiers  
(Kampers-Mahne 2004: 558)

Although certain preverbal temporal adverbs are possible in both French and English, e.g. *then* (34a,b), French allows a greater set than English (35); note the contrast in (36a,b).

(35) Temporal and aspectual adverbs licensing VS inversions in French:  
*alors* 'then', *après* 'after', *enfin* 'finally', *puis* 'then', *ensuite* 'next', *aussitôt* 'immediately', *tout d'abord* 'first', *parfois* 'sometimes', *bientôt* 'soon', *brusquement* 'brusquely', *lentement* 'slowly', *soudain* 'suddenly', *très vite* 'very quickly', ... etc.  
(Lahousse 2003: 182)

(36) a. Mais déjà vient la nuit. (French)  
but already comes the night  
'But already night is falling.'

b. \*but already comes/came the night. (English)  
(adapted from ex. (7b), Lahousse 2003: 183)

Therefore, the question arises as to the root of this difference, i.e. why a greater set of temporal adverbs may satisfy the EPP in French. Indeed, it is perhaps overly stipulative to assume that all temporal XPs taking part in inversion, in either French or English, are always formally co-opted as temporal locations, i.e. bear a formal locative specification and are



incorporated into the argument structure before being subject to A/A'-movement. We submit then that it is possible that non-locational temporal XPs can also satisfy EPP via external Merge.

We draw on proposals by Chomsky (2013) that the subject-related nature of the EPP results from a labelling conflict between the external argument in Spec,vP and v forcing evacuation of the external argument to SpecTP. An unaccusative then is not subject to a labelling conflict stipulating evacuation of the subject. Therefore, the EPP relation to subjecthood is weakened. building on this, Alexiadou (2000) proposes that languages without subject requirements in TP may merge certain temporal adverbs in SpecTP. If we are correct that unaccusatives weaken the subject-relatedness of EPP, certain initial temporal adverbs, e.g. *then* can be merged in SpecTP (cf. Fuß 2008). Thus, a potential difference between English and French is the more limited set of non-location temporal adverbs mergeable in SpecTP in English.

#### 4.2.4 The problems of a stage-topic explanation

Before presenting an explicit formal comparison of English and French, we (re)turn briefly to previous proposals by Lahousse (2003, 2006, 2007, 2011) for French and Teixeira (2016) for French and English that LI structures involve the ability of a stage topic to check the EPP. For them, the preverbal element's stage-topic status is crucial, claiming that stage topics satisfy both EPP and topic requirements in presentational/broad focus inversions.

We have already demonstrated that topichood is not a defining characteristic of LI and is indeed undesirable for languages with embedded LI, i.e. French and Italian. A stage topic account is inappropriate for English (contra Teixeira 2016: 7) as it cannot and cannot explain how the EPP is apparently bypassed by only a select set but not all stage topics. For instance, frame-setting temporal adverbial adjuncts are also stage topics (Lahousse 2007); but these are not possible in English LI (see 37a,b).

- (37) a. ??On Friday arrived the Eurostar (at platform 12).  
 b. (On Friday) at platform 12 arrived the Eurostar.

Furthermore, Lahousse (2003: 189) argues that French 'VS is licensed by the presence of an adverb which signals the presence of a (covert) stage topic' which seemingly satisfies T's EPP requirement. Spatio-temporal adverbs furthermore apparently always 'require the

presence of this implicit stage topic in order to be licensed’ (Lahousse 2003: 190). However, the motivation or locus of the covert element is unclear. Moreover, an omnipresent covert stage topic cannot predict the fact that matrix null-inversions are limited to verbs of appearance, but our proposed covert *Exp<sub>LOC</sub>* does. We thus hold that cases of overt inversion always involve overt XPs satisfying EPP, SoP, or both as argued throughout.

#### 4.2.5 Formal analysis

We have shown that topichood, i.e. [+Aboutness; +D-linking] is not a necessary precondition for LI in French but is for English. We have further argued that SoP and (stage)topichood are not synonymous. The root-embedded symmetry of French overt LI allows us to draw on our analysis for Italian, i.e. spatio-temporal XPs act as SoP, i.e. [+aboutness; - D-linking]. However, unlike in Italian, these preposed XPs also check EPP on T via movement or alternatively via external Merge of adverbs like *alors* ‘then’ or *déjà* ‘already’. We thus propose the analysis in (38a) for overt LI in French; Italian is given as a reference point (38b)

##### (38) a. **French**

[CP C [SubjP *PP<sub>LOC</sub>* *hors de la maison* [TP *PP<sub>LOC</sub>* [T *est* [VP v *sorti* [SC DP *Jean PP<sub>LOC</sub>*]]]]]]]  
 out of the house is exited Jean

##### b. **Italian**

[CP C [SubjP *PP<sub>LOC</sub>* *fuori dalla casa* [Subj [TP T *è* [VP v *uscito* [VP ∅ [SC DP *Luca PP<sub>LOC</sub>*]]]]]]]  
 out of-the house is exited Luca

However, the root-embedded asymmetry in English LI presents a challenge, since we must explain i) how the EPP and SoP can be checked/valued and ii) why the locative is infelicitous if it remains in SpecTP or SpecSubjP. We first adopt suggestions by Roberts (2010a:169-172) that T’s EPP is satisfied by movement of the locative to SpecTP (see also Haeberli 2002: 59-66), yet the matrix constraint results from further movement to SpecCP.

However, in order to explain the infelicity of inverted locatives in TP, we draw first on Rizzi & Shlonsky (2006), who propose that the locative itself cannot act as SoP in English. We propose a modified position: Firstly, while Rizzi & Shlonsky (2006) do not assume an EPP, we suppose that the locative checks EPP via the inherent D/N nature of locative features, or external Merge of adverbs such as *then*. Secondly, because the locative element

encodes both [+ Aboutness] and [+ D-linking], i.e. a topic, it cannot obtain a simple SoP reading, i.e. [+Aboutness] (Rizzi 2005), forcing movement to SpecCP. Therefore, [+Aboutness] on the locative suffices to check a subset of features on Subj, preventing Crash, yet the [+D-linking] property renders the utterance infelicitous if the locative does not vacate this position and move to SpecCP and check topic features there.<sup>9,10</sup> Thus, the English Subject Criterion (cf. Rizzi & Shlonsky 2006) in LI is checked defectively; the analysis is shown in (39). Why English locatives cannot encode SoP alone is unclear, yet it seems correlated with a strict requirement for nominative subjects.

(39) [<sub>CP</sub> PP<sub>LOC</sub> *into the room* [<sub>C</sub> [<sub>SubjP</sub> PP<sub>LOC</sub> [<sub>Subj</sub> [<sub>TP</sub> PP<sub>LOC</sub> [<sub>T</sub> [<sub>VP</sub> *came* [<sub>SC</sub> DP *John* PP<sub>LOC</sub>]]]]]]]]]

### 4.3 Interim summary

We have now discussed overt and null-LI in French, English, and Italian, and may fully compare the established formal ingredients of LI and their cross-linguistic effects (Table 3). A clear continuum of flexibility emerges with Italian (an NSL) as the most flexible, French in the middle, and English the most conservative.

Table 3: The formal ingredients of LI and types across Italian, French, and English<sup>11</sup>

	Formal ingredients							Types of LI			
	Loc checks EPP on T	Loc checks SoP in SubjP	Loc to CP	<i>pro</i>	<i>pro</i> <sub>LOC</sub>	<i>pro</i> <sub>SIT</sub>	Exp <sub>LOC</sub>	Null-LI		LI Mat.	LI emb.
								all	uVoA		
<b>Ital.</b>	-	+	±	+	+	+	-	+		+	+
<b>Fr.</b>	+	+	±	-	-	-	+	-	+	+	+
<b>Eng.</b>	+	±*	+	-	-	-	-	-		+	-

<sup>9</sup> Rizzi & Shlonsky (2006) argue that Fin checks Subj via [+N<sub>LOC</sub>] features when Subj is unchecked; the locative moves directly to the C-domain.

<sup>10</sup> Alternatively, SoP is a property of T (Mohr 2005); if an element remains in TP checking phi/D-related EPP features but is not SOP, an infelicitous reading obtains.

<sup>11</sup> ±\* signifies the proposed partial or defective checking of SoP, whereas ± elsewhere signifies the presence but non-obligatory status of a given operation.

In Section 3, we showed that Italian LI emerges from locatives ability to act as SoP but that T's EPP is unimportant. For English, we argued instead for a conspiracy of EPP checking in T, topicalization to the C-domain, and infelicitous SoP checking. French LI, however, resulted from a conspiracy of SoP in SubjP and EPP in TP, both checked by the locative XP (cf. § 4.2.5).

## 5. Towards a typology

We briefly touched on the orthogonal nature of V2 to LI in English or French (§ 4). Although it is intuitively appealing that LI relates to residual V2 inversions (cf. Mohr 2005), LI clearly results instead from the ability of certain spatio-temporal expressions to check the EPP and/or act as SoP. These requirements are not excluded by V2, yet inversions involving locatives in V2 languages do not indicate LI and are not subject to the same broad-focus constraints. We turn now briefly to the compatibility of LI with V2 systems, contrasting German and Dutch, allowing us to expand our proposed typology.

### 5.1 LI in a V2 Language

V2 languages such as German or Dutch produce inversions resembling LI (40a), yet inversion is not dependent on a broad-focus reading, but is instead licensed by V-to-C and XP-to-SpecCP movement conditioned by a) an edge feature on C, and b) the informational content of the initial constituent. Consequently, the initial XP may have a contrastive, topic, or focus reading, the difference being marked prosodically. These interpretations extend to preposed objects or locatives involving transitive verbs, which do not resemble LI.

- (40) a. [In den Wald] ist Peter gelaufen. (German)  
           in the.ACC forest is Peter walked  
           ‘Into the forest walked Peter’
- b. [Den Hund] hat Peter gekauft.  
           the.ACC dog has Peter bought  
           ‘Peter bought the dog.’
- c. [Im Wald] hat Peter den Hund gekauft.  
           in-the.DAT forest has Peter the.ACC dog bought

‘In the forest Peter bought the dog.’

Salzmann (2004) explores the possibility of LI in German, concluding that an inverted locative structure never indicates LI in German. We share this conclusion. This emerges from a) the absence of a subject-related EPP in TP (Haider 2010), and b) the mediation of XP-raising by the C-domain and not [+SoP] in the T-domain (Mohr 2005), our SubjP. The lack of a dedicated subject position in the German T-domain indicates that SubjP is likely absent. Consequently, German lacks the formal ingredients necessary for features to conspire to create LI.

In contrast, although Dutch resembles German in that it is OV and V2, it appears to possess a basic LI structure (Hoekstra & Mulder 1990; Zwart 1992; Bresnan 1994). Like English but unlike German, Dutch can merge an expletive *er* ‘there’ in unaccusative and passive contexts, checking a D-related EPP (EPP<sub>D</sub>) in SpecTP (46a). Yet SpecTP is not otherwise obligatorily related to subjecthood (but see Zwart 2005). We follow general assumptions that the sister of TP, i.e. vP, generally pied-pipes to SpecTP in place of a subject DP (Haegeman 2000; Biberauer & Richards 2006; Zwart 2011: 290 and sources cited there). A peculiarity in Dutch expletive constructions emerges from the fact that *er* can be omitted if a locative argument is fronted, i.e. moves to SpecTP; note the contrasts between the marginal (41b)<sup>12</sup> and grammatical (46c,d,e) (cf. Zwart 1992, ex. 24):

- (41) a. dat er mensen gearresteerd werden. (Dutch)  
           that there people arrested got  
           ‘that people were arrested.’
- b. ?? Gisteren werd gedanst.  
           yesterday got danced  
           Intended: ‘Yesterday there was dancing.’

---

<sup>12</sup> The German equivalent of (54b) in (i) is only grammatical without expletive *es*, which cannot surface postverbally.

- (i) Gestern wurde (\*es) getanzt.  
       yesterday got EXPL danced  
       ‘Yesterday there was dancing.’

- c. Gisteren werd er gedanst. **Expl er**  
 yesterday got EXPL danced  
 ‘Yesterday there was dancing.’
- d. In de tuin werd gedanst. **LI**  
 in the garden got danced  
 ‘People were dancing in the garden.’
- e. Gisteren werd in de tuin gedanst. **LI**  
 yesterday got in the garden danced  
 ‘Yesterday people were dancing in the garden.’

This patterning occurs in both matrix and embedded contexts, yet the complementary distribution between locatives and *er* appears not related to SoP or the C-domain, but rather simply the D-“ness” of EPP in TP. We consider *er* a vP expletive that can be omitted if a locative XP moves to SpecTP instead of vP. We refer the reader to Biberauer and Richards (2006) for the nature of EPP<sub>D</sub> checking in Dutch, whereby pied-piping of vP to SpecTP can be optionally bled by DP-fronting akin but not equal to the English type of subject raising. We give a tentative analysis in (42):

(42) [<sub>CP</sub> *Gisteren* [<sub>C</sub> *wird* [<sub>TP</sub> *P<sub>Loc</sub> in de tuin* [<sub>T</sub> [<sub>vP</sub> *v gedanst* [**PP<sub>Loc</sub>**]]]]]]]

Therefore, compared to LI in Italian, French, and English, Dutch shows a bare-bones version characterized by the locatives ability to check EPP<sub>D</sub> without any other necessary feature conspiracy.

## 5.2 A cross-linguistic typology of LI: a conspiracy

From comparison of the data discussed here and in sections 3 and 4, it is further evident that LI is orthogonal to V2 syntax. We can now compare the ingredients of variation in LI across the full range of language types explored: a Romance NSL (Italian), a Romance overt-subject language (French), a Germanic overt-subject language (English), and a Germanic V2 language (Dutch). We have argued for the set of syntactic requirements in (43) as a source of variation in LI. However, interactions between EPP, SoP, and topic requirements alone cannot

account for the range of LI structures observed. We must also factor in different types of covert argument, which interact with syntactic subject requirements to produce variation in null-LI structures, as we have argued for Italian and French. Consequently, we present the formal typology of LI in Table 4, considering Italian, French, English, and Dutch, taking German as a reference point for a language without LI. Our proposals entail a conspiracy of formal factors “up high” and “down low” which act in different combinations to license greater or lesser flexibility.

(43) **Base requirements for LI:**

- i. Some formal EPP requirement in TP.
- ii. The ability of certain spatio-temporal XPs to satisfy the formal requirements for
  - a. EPP (Dutch)
  - b. SoP (Italian)
  - c. EPP and SoP (French)
  - d. EPP and Topichood (English)

Table 4: The formal ingredients of LI and attested types across Germanic and Romance.

	Formal ingredients							Types of LI			
	Loc checks EPP on T	Loc checks SoP in SubjP	Loc to CP	<i>pro</i>	<i>pro</i> <sub>LOC</sub>	<i>pro</i> <sub>SIT</sub>	Exp <sub>LOC</sub>	Null-LI		LI mat.	LI emb.
								all	uVoA		
<b>Ital.</b>	-	+	±	+	+	+	-	+		+	+
<b>Fr.</b>	+	+	±	-	-	-	+	-	+	+	+
<b>Eng.</b>	+	±*	+	-	-	-	-	-		+	-
<b>Dt.</b>	+	-	-	-	-	-	-	-		+	+
<b>Ger.</b>	-	-	-	-	-	-	-	-		-	-

In sum, French locatives check the EPP and act as SoP, while in Italian only SoP is the important factor, since the EPP in TP may be checked via other means. English LI is exceptional because it cannot embed due to a requirement for further XP<sub>LOC</sub>-movement to SpecCP (Rizzi & Shlonsky 2006; Roberts 2010a). Dutch shows a bare-bones LI in which the locative need check only EPP<sub>D</sub> without any other necessary feature conspiracy or the existence of a subject-related position.

Overall, the most flexible LI systems, i.e. null overt LI in matrix and embedded contexts, emerge when the locative can check SoP in SubjP but the EPP is checked via other means. NSLs possess an advantage in producing various covert inversions as they have a greater repertoire of null arguments. However, as shown by Corr (2016) Ibero-Romance demonstrates considerable variation in the types of LI available; we have not been able to touch on these as they lie outside the scope of our investigation. Further work applying this framework to those languages and indeed non-European languages will tell if our approach is along the right lines.

Finally, we mentioned in section 4.2 that LI is subject to conditioning outside the syntactic domain. Since it is our aim to provide a typological treatment of LI, it would be amiss not to give attention to extra-syntactic factors which have typological implications for LI. We present a preliminary hypothesis accounting for these restrictions.

## 6. An excursus on non-syntactically driven constraints

We demonstrated in sections 3-4 that extra-syntactic constraints act on LI. For example, in LI the English present perfect is infelicitous, but Italian and French allow perfect tenses. Likewise, sentential negation is infelicitous in LI across languages. This section offers some speculations on the origin of these restrictions.

Landau (2010: § 9.1) proposes that a universal characteristic of LI is that it induces presentational focus on the postverbal DP. We develop this view further and propose that the semantics of presentational focus in LI translates into an *evidential* flavour. More precisely, we hypothesise that LI can act as an evidential marker conveying first-hand perception, from which emerge both the ban on the English present perfect, and negation in broad focus.

In section 4.1, we proposed that a decisive property of French verbs of appearance is that they select for a syntactically active covert experiencer/observer argument *Exp<sub>LOC</sub>*, accounting for why they license null-LI and correlatively presuppose the occurrence of a perception event *e* on the part of the experiencer/observer. We speculate that from a semantic perspective LI might always actually be endowed with an evidential flavour, regardless of a syntactically covert experiencer. We posit that at least for English and French this evidential flavour correlatively involves an implicit experiencer argument in the semantics (see also Hole and Frazer 2019 for the claim that English LI projects an evidential component). We do not have space to properly explore Italian, whose syntax is far more flexible; it is possible that the combination of rich  $\phi$ -specification (Alexiadou & Anagnostopoulou 1998) and richly



specified deictic verbal structure (see Acedo-Matellán 2016) together with a greater array of covert arguments, e.g. *pro*<sub>LOC</sub> and *pro*<sub>SIT</sub> and their associated deictic content, may suffice to produce similar effects without recourse to an implicit experiencer.

Extending the arguments we made for French null-LI (§ 4.1), We suggest that in sentences such as (44), an (asserted) appearance event *e'* is part of what is observed through the (presupposed) perception event. This appearance event *e'* amounts to the emergence of a new element --- the postverbal DP's referent --- in the experiencer's field of perception. We also proposed that this presupposed perception event *e* provides a contextually salient time interval serving as the reference time for the LI sentence. Thus, the English overt LI sentence in (44) presupposes an observing-the-house event *e* by an implicit experiencer *x*, and asserts an appearance-of-Goldilocks event *e'* in *x*'s field of vision, *e'* being part of what is perceived in *e*. Furthermore, the running time of the observing-the-house event *e* provides a contextually salient past against which (44) is interpreted.

(44) Out of the house emerged Goldilocks.

In favour of this proposal, we observe that denying the perception of the appearance event often degrades the acceptability of LI. In French for instance, while (45) (where first-hand perception by a covert experiencer is plausible) is perfect, (46) is greatly degraded, for the subsequent context makes clear that the event of somebody going out of the house was not directly perceived, but indirectly inferred.

(45) De la maison est sorti quelqu'un. (French)  
 of the house is exited somebody  
 'Somebody went out of the house.'

(46) #De la maison est sorti quelqu'un (vu les traces de pas). (French)  
 of the house is exited somebody (seen the traces of steps ).  
 Mais personne n' a rien vu.  
 but nobody NEG has nothing seen  
 Intended: 'Somebody went out of the house (given the footsteps). But nobody saw anything.'

For English, Hole and Frazer (2019) observe a similar contrast between (47) and (48) (their original example contains the verb *perceive* instead of *see*)

(47) #There marched Basques through the square, and I didn't see it.

(48) Basques marched through the square, and I didn't see it.

The crucial point for the ban on the English present perfect and indeed negation in broad focus is as follows: given that the asserted event *e*' is presented as directly perceived from the experiencer location, we obviously have to deal with a *particular* event *e*'. That is, we are not talking about *any* existing event satisfying such and such properties, but rather about an event witnessed by the experiencer, which thus has to be a specific event. In other words, first-hand perception automatically yields specificity. We shall now show how this evidential flavour goes toward explaining well-known constraints on LI.

### **6.1 The ban on broad focus negation**

The proposed evidential flavour attached to LI contributes toward the infelicity of negation in LI, as illustrated through (49), the negated version of (44):

(49) #Out of the house didn't emerge Goldilocks.

Negation is a presupposition hole: it lets the presuppositions of its complement slip through it (Karttunen 1973). Consequently, the negative (49) keeps conveying the occurrence of the observing-the-house event, just as (44). However, (49) denies the occurrence of an appearance-of-Goldilocks event, which by assumption is part of what is perceived by the experiencer/observer. This is the source of the infelicity in (49): why report the perception of an event whose occurrence is denied? More generally, broad-focus negation is infelicitous in LI because it amounts to denying the occurrence of the event understood to be perceived by the experiencer. The problem is obviously solved when negation operates at the DP level of a narrow contrastive foci (50).

(50) Out of the house emerged not Goldilocks but a bear!

Sentence (50) does not negate the occurrence of an appearance event, but rather that this event has the property of involving Goldilocks as its theme. Negation therefore does not clash with the evidential flavour of LI: an appearance event *does* take place, and may thus serve at part the intentional object of the presupposed observing-the-house event.

Let us now return to the distribution of aspect/tense markers in LI in English.

## 6.2 The ban on the English present perfect

In section 4.2.1 we showed the English present perfect and LI to be incompatible (51), while compound perfect tenses are felicitous in French and Italian.

(51) #Down the hill has rolled the ball.

An explanation of the ban first requires discussion of what Partee (1973) calls a referential/pronominal, as opposed to existential/quantificational, use of tense. Under the referential use of PAST, a past sentence presupposes a contextually salient interval serving as its reference time. By contrast, under the existential use of PAST, a past sentence quantifies over a (yet unfamiliar) interval serving as the reference time. Interestingly, Kratzer (1998) reports a difference between English and German in this respect, illustrated through the contrast in (52a,b); acceptability is evaluated in an out-of-the-blue context.

- (52) a. Who built this Church? Borromini built this church.  
b. #Wer baute diese Kirche? Borromini baute diese Kirche.

Kratzer observes that the English question (52a) is acceptable in such an out-of-the-blue context. She concludes that the English simple past is not necessarily pronominal, as this would require a contextually salient past time, by assumption absent in out-of-the-blue contexts. In contrast, (52b) is deviant, suggesting that the German preterite is always pronominal.

More recently, Zhao (2018, 2019) investigated the competition of interest between the English simple past and present perfect relevant to LI. She proposes that the present perfect cannot have referential/pronominal use, i.e. is banned when a salient past time is clearly understood as already constituting part of the context. For instance, she observes that in (53a), there is a past time in the context where the addressee was expected to graduate, but not in

(53b). Similarly, she notes that if the speaker knows that the addressee had a trip to Italy last month and is asking if (s)he visited Rome during the trip, (53a) is a felicitous question, but (53b) is not, precisely because the present perfect has no pronominal use, being an indefinite past. By contrast, as Zhao (2018) observes, if Mary asks about John's experience out of the blue, the present perfect is fine (54b) (but the simple past (54a) is odd, for it has by assumption no existential use).

- (53) a. Did you graduate?  
b. Have you graduated ?

- (54) Context: Mary knows that John had a trip to Italy last month<sub>i</sub>, and she's asking about it.  
a. Did<sub>i</sub> you visit Rome?  
b. Have you visited<sub>j/#i</sub> Rome?

Returning to LI, according to our proposal, an LI sentence is always interpreted against a context in which a past time serving as the reference time is salient, namely, the running time  $t(e)$  of the presupposed perception event  $e$ . In short, LI requires the pronominal use of PAST; it is always interpreted against the background of a salient past interval, namely  $t(e)$ . This explains the ban of the English present perfect under Zhao's proposal that present perfect lacks pronominal use. Thus, (51) is infelicitous because the presupposed observing-the-hill event provides a salient time interval serving as the reference time for (51), thus inducing a pronominal use of past tense, that the present perfect cannot convey. In contrast, the French or Italian periphrastic perfect can have the pronominal use required by LI (see also Zhao 2018)

### 6.3 Interim summary

For French and English we proposed that an implicit experiencer/observer and a presupposed perception event contribute to an evidential flavour of LI, while leaving the question more open for Italian. However, our account has been limited to those verbs tied to appearance. Disappearance verbs appear degraded in LI, see for instance the French and English examples in (55)

- (55) a. Dans le bois est soudain apparu un enfant. (French)  
in the woods is suddenly appeared a child

‘In the woods suddenly appeared a child.’

- b. #Dans le bois a soudain disparu un enfant.  
in the woods has suddenly disappeared a child  
#‘In the wood suddenly disappeared a child.’

Nevertheless, French LI with disappearance verbs is salvageable in certain contexts, see for instance (56), yet it remains infelicitous in English.

(56) Context: There is a group tour of a disused mine; a particular tunnel is visible to the group and the guide says:

Et dans ce tunnel ont disparu trois enfants, (French)  
and in this tunnel have disappeared three boys  
que plus personne n’ a jamais revu.  
that more nobody NEG has ever seen  
‘And in this tunnel three boys disappeared, never to be seen again.’

We are unsure about the factors making (56) more acceptable than (55b) in French. An obvious difference is that in (55a), the experiencer/observer is identified with the speaker, while in (56), the speaker is understood as distinct from the experiencer/observer. Moreover, we already showed in section 3 that Italian is more flexible with regards to both covert and overt inversions involving verbs of disappearance; *pro*<sub>SIT</sub> is capable of licensing such null-LI. This indicates once more that the same explanation may not apply for LI in all languages, yet the discussed constraints on English and French fall out from this proposal. We speculate that the highly evidential flavour of English and French LI may be related to its peripheral status as narrative device. For reasons of space, further cross-linguistic comparison is left for further research. Likewise, we cannot fully account here for how evidentiality arises in all types of verb possible in LI, but we believe our proposal to be a fruitful path for further work investigating the interplay between syntax and semantics in LI.

## 7. Conclusion

We have proposed that cross-linguistic variation in LI in Romance and Germanic results from different levels of conspiracy on the one hand from the capacity of locative expressions to

satisfy EPP, SoP, and CP-topic requirements, and on the other hand, for a language to produce different types of null argument. For Germanic, we showed V2 Dutch LI to involve only a bare-bones version of LI involving the EPP<sub>D</sub> in T but nothing else; English LI emerges instead from conspiracy between C and EPP, producing a matrix-embedded asymmetry, yet the role of SoP appears defective. For Romance LI, we demonstrated how locatives can always be SoP but need not necessarily be topics, permitting both matrix and embedded LI. NSLs such as Italian also permit satisfaction of SoP requirements via both thematic null-locative or covert situational arguments, while the EPP is satisfied via other means. In contrast, both SoP and EPP must be checked in French; French null-LI thus is only possible with verbs of appearance, which we attribute to selection of a covert *Exp*<sub>LOC</sub>. Nonetheless, bans on negation and the English present perfect emerge from conspiracy at the semantics and pragmatics interfaces. Further investigation of other varieties possessing LI from both these syntactic and semantic perspectives could inform this typology further, for instance Ibero-Romance and Bantu languages.

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